

rate and distinct from its neighbour, though generally on the same or nearly the same horizontal plane.

In our nest there are several layers one above another, the main support being thin walls of wax built up the sides and throughout the mass at intervals in a perpendicular manner, and reaching to the top of the hive.

The queen has a very large body, very much larger in comparison with the workers than that of the queen of the common hive-bee, and very similar to some of the termites. A small dipterous insect was observed in the nest when it was first taken, but this disappeared after it was fully sealed. This may prove to be the natural enemy of this insect.

Our bee has no sting, which renders it particularly easy to handle and observe, and the want of which doubtlessly occasions it to use such careful means of defence to secure its home from the attacks of its enemies.

The honey is perfectly sweet and wholesome, very clear, and of a nice flavour, but when squeezed out soon becomes sour.

Another species of *Trigona* is found in hollow or decayed trees in our gardens, in large nests 2 to 3 feet in diameter, formed of black, gummy, waxy, or resinous matter. This species is very pugnacious, and attacks persons coming near it, with a buzz and hum similar to that of the common honey-bee; but it is powerless to harm, as it has no sting. It, however, fixes itself in the hair of the head or beard, and produces a peculiar tickling feeling, which quickly induces a sensation of fear in those who know the result of the attack of an angry common hive-bee; and even when its character is known the attack (almost unconsciously) causes the intruder to retreat.

LIV.—Description of Two new "Pocket-Mice" of the Genus *Heteromys*. By OLDFIELD THOMAS.

WHILE attempting to determine a specimen belonging to the genus *Heteromys* obtained by Dr. Audley Buller in Jalisco, Mexico, I have found it necessary to make an examination of all the species of the genus, and I find that they are readily divisible into groups by the characters of the soles, whether naked or hairy, with five pads or six. These characters do not seem to have been known to Mr. Alston when, in his

great work on the Mammals of Central America, he lumped under one heading four species described by Gray and one by Peters; for two of the five, namely *H. irroratus* and *albo-limbatus*, are hairy-soled, with five pads, and the other three, *H. melanoleucus*, *longicaudatus*, and *adpersus*, are naked-soled and have six pads. To the first group there also belong *H. Alleni*, the South-Texan species, and *H. Bulleri*, the Mexican one now described; while to the second, besides those mentioned, there should be added the Trinidad species, *H. anomalus*, Thomps., and Gray's *H. Desmarestianus*. Finally, the second new species now described, *H. Salvini*, forms a third, annectant, group, with the hairy sole of the first and the six pads of the second.

Heteromys Bulleri, sp. n.

Intermediate in size between *H. Alleni* and *H. irroratus*. General colour above the usual smoky grey, grizzled and lightened with yellowish; sides with an indistinct yellowish band along the junction of the back and belly colours; lower surface from mouth to anus pure white; ears dark, apparently not white-edged; hands and feet white; arms to elbow also white, but on the hind limb the dark colour of the rump passes down to the heel and all round the ankle, but the inner side of the upper leg is white.

Claws, especially the anterior ones, very long. Soles of hind feet hairy for their posterior half, the hairs pale brownish; sole-pads five in number; the large posterior pad circular in outline. Tail rather longer than the head and body, well-haired throughout, clearly bicolor, brown all along its upper surface, white on the sides and below.

Mammæ 1—2=6.

Skull strong and stoutly built, differing mainly from that of *H. Alleni* in its much greater size, and from that of *H. irroratus* by its differently shaped interparietal, which, more like that of *H. Alleni*, is comparatively rounded, with its longitudinal 62·5 per cent. of its transverse diameter, and has its anterior edge very convex forwards.

Teeth much worn in the only specimen, but in their shape and proportions they do not seem to differ from those of *H. Alleni*. Equally worn teeth of *H. irroratus* are not available for comparison.

Dimensions of the type (an adult female in alcohol):—

Head and body 114 millim.; tail 120; hind foot 28·5*

* Without claw.

ear, above head 10·5, from notch 15; heel to front of last foot-pad 12·5.

Skull: basal length 29·5; greatest length 34·5; greatest breadth 16·8; nasals, length 13·5; interorbital breadth 8·5; interparietal, length 4·0, breadth 6·4; diastema 9·5; palate, length 21; length of upper tooth-series 5·3.

Hab. La Laguna, Sierra de Juanacatlan, Jalisco, Mexico, 7000 feet. Coll. Dr. A. C. Buller, December 1892.

A male specimen of *H. Alleni* from Brownsville, Texas, the typical locality, has a caudal length of 110 and a basal length of 26 millim., while a full-grown skull has a greatest length of 30·3 millim., from which it will be seen that that species is considerably smaller than *H. Bulleri*.

Heteromys Salvini, sp. n.

Heteromys longicaudatus, Alst. Biol. Cent.-Am., Mamm. p. 167, pl. xvii. fig. 2 (1880) (nec Gray).

Size about equal to that of *H. Bulleri*, but the feet are decidedly shorter, being as short as in *H. Alleni*. Fur spiny as usual. General colour blackish, rather darker than in most of the other species, grizzled with yellowish on the back. Lower surface pure white, as usual. Outer sides of forearm with a narrow slaty-grey edging, more conspicuous than in *H. Alleni* and *Bulleri*, less than in *H. longicaudatus*. Hind foot very short, as short as in *H. Alleni*; posterior half of sole covered with short brownish hairs; pads six, as in the larger naked-soled species, the two posterior pads very close together in the median line of the foot. Tail thinly haired, bicolor, but not so sharply and decidedly as usual, brown above, whitish below.

Skull in size and shape very like that of *H. Bulleri*, but the interparietal is much more extended transversely, while only of about the same antero-posterior diameter; its longitudinal percentage is therefore only 44 of its transverse.

Molars proportionally small and slender.

Measurements of the type (an adult male in skin):—

Head and body (c.) 115 millim.; tail (imperfect at tip) 95+?; hind foot 26·5; heel to front of last foot-pad 11.

Skull: basal length 28; greatest length 33·6; greatest breadth 15·2; nasals, length 13·1; interorbital breadth 7·6; interparietal, length 4·5, breadth 10·2; diastema 8·9; palate, length 19·2; length of upper tooth-series 4·4.

Hab. Dueñas, Guatemala. Coll. O. Salvin, July 31, 1873.

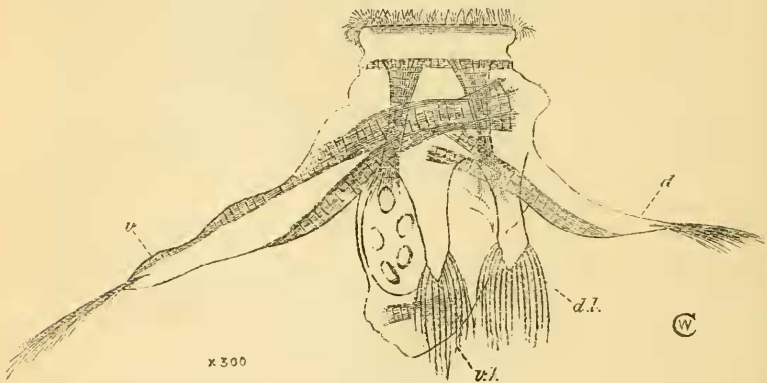
The type specimen of *H. Salvini* is the very one referred to and figured by Mr. Alston in the work above quoted.

It is with great pleasure that I connect with this interesting annectant species the name of Mr. Osbert Salvin, its discoverer in 1873, and one of the editors of the great work in which it is so beautifully figured.

A *Heteromys* from Costa Rica, in the Museum collection, also appears to belong to *H. Salvini*; its hind feet agree precisely in their structure with those of the type, but are even shorter, measuring only 25 millim.

LV.—*A new Pedalion.* By W. T. CALMAN,
University College, Dundee.

THE remarkable rotifer *Pedalion mirum*, discovered by Dr. Hudson in 1871, has been the source of much interest and speculation to zoologists on account of its aberrant form and supposed arthropod affinities. Though it has since been found in several localities, both in this country and on the continent *, it has always been a great rarity, and no allied



Pedalion fennicum, Levander.—*d.* dorsal appendage; *v.* ventral appendage; *d.l.*, dorso-lateral appendage; *v.l.*, ventro-lateral appendage.

forms were known until Dr. K. M. Levander, of Helsingfors, announced in the 'Zoologischer Anzeiger' for October last †

* See Imhof, "Notiz ü. d. Vorkommen von *Pedalion mirum*, Huds.," Zool. Anz. 13 Jahrg. pp. 609–611 (1890).

† K. M. Levander. "Eine neue *Pedalion*-Art," Zool. Anz. xv. pp. 402–404 (1892); "Zusatz z. meiner Mitth. über *P. fennicum*," ibid. xvi. pp. 26, 27 (1893).